

## NOS SGPS

TELECOMMUNICATIONS

STUDENT: MANUEL MEDEIROS

## COMPANY REPORT

7TH JANUARY 2014

## Converging their way to the upside

- **Exhibiting commercial momentum** – NOS added 138k mobile users in 3Q14 vs. 100k the previous quarter and also reduced Pay TV losses from 22.7k in 2Q14 to only 8.9k this quarter, despite Vodafone's aggressive pricing, which I show to be unfeasible
- **Growing in a €2bn corporate market** – NOS has won in the past months flagship large corporate accounts from the market incumbent like CGD and BPI, but it can keep building that backlog further as an integrated player in a segment where it only had 15% market share as of 2013
- **Potential for substantial shareholder remuneration** – with no significant M&A in sight, there is potential to pay-out €0.27 per share in dividends (6% dividend yield) without breaking the 2.0x Net Debt/EBITDA barrier in 2016
- **Refinancing deals as a catalyst** – by placing privately €275m in bonds, NOS reduced its average cost of debt by 50bp in just 9 months. With €327m in debt maturing in 2015, the consequently lower risk of debt should be a catalyst for the shares in 2015

## Company description

NOS is a cable and telecommunications company that offers Pay-Tv, broadband, fixed voice and mobile services in the Portuguese market. Its activities also include the cinema distribution and exhibition as well as content creation and sale through NOS-owned Pay-Tv channels.

<b>Recommendation:</b>	<b>BUY</b>
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<b>Price Target FY15:</b>	<b>6.46 €</b>
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<b>Price (as of 7-Jan-15)</b>	<b>4.95 €</b>
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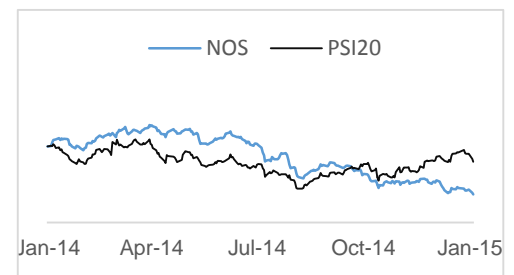
Bloomberg: NOS PL

52-week range (€)	3.90-5.83
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Market Cap (€m)	2560
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Outstanding Shares (m)	512.2
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Source: Bloomberg



Source: Bloomberg

(Values in € millions)	2013	2014E	2015E
Revenues	990	1401	1426
EBITDA	318	533	565
Net Profit	10	96	135
EPS	0.03	0.19	0.26

Source: Company Information; NOVASBE Research

THIS REPORT WAS PREPARED BY MANUEL MEDEIROS, A MASTERS IN FINANCE STUDENT OF THE NOVA SCHOOL OF BUSINESS AND ECONOMICS, EXCLUSIVELY FOR ACADEMIC PURPOSES. THIS REPORT WAS SUPERVISED BY ROSÁRIO ANDRÉ WHO REVIEWED THE VALUATION METHODOLOGY AND THE FINANCIAL MODEL. (SEE DISCLOSURES AND DISCLAIMERS AT END OF DOCUMENT)

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## Executive Summary

I initiate coverage of NOS SGPS with a BUY recommendation and a fair value of 6.46€, including a cash in from dividends in 2015, with a 30.5% upside to its current price of €4.95, as of January 6<sup>th</sup>.

Since the Zon-Optimus merger, NOS became a fully integrated player in the Portuguese Telecommunications market, offering services of broadband, fixed voice, Pay TV and mobile both separated and in a convergent manner. NOS has shown significant commercial momentum in recent quarters, both illustrated by increasing its market share in the mobile sector, adding over 138k subscribers in 3Q14 but also by losing Pay TV customers in a gradually slower rate.

My view is that if NOS displays this commercial strength when in a context where there is Vodafone's very aggressive pricing – 3P bundle at €24.99 a month for 2 years – then there is great potential for NOS to up-scale even more of its wide base of Pay TV customers to higher value bundles that include broadband and mobile as well, when the competitive landscape smoothens. I am confident that Vodafone will ease its pricing policy after 2015 on back of two main reasons. Firstly, Altice winning bid will make the market shift from 4 players to only 3, thus diminishing competitive pressure. Secondly, I show below that network and programming costs alone make Vodafone lose money on each customer it adds at its current price of €24.99, be it through satellite or fibre.

Lastly, I consider that given the consolidated picture of the Portuguese Telco market going forward and the statement by NOS management that it's not in their objectives to spend further money in Africa through ZAP or any other player, than the cash flow generated will not be used to pursue any major M&A activity. Thus, the cash will most likely be distributed to shareholders. NOS could distribute up to €0.27/share in dividends in 2016 without breaking the 2x Net Debt/EBITDA barrier, thus maintain a stable level of leverage.

Another reason I am bullish on the stock, is that NOS is showing ability to finance itself at lower cost, decreasing its 50bp in a 9 month period only on 2 refinancing operations amounting to €275m. With €325m bonds and loans maturing throughout 2015, refinancing deals will likely constitute a positive catalyst for the shares, as debt becomes more likely to be repaid. Also, a lower cost of debt is supportive of my hypothesis of a high shareholder remuneration going forward.

## Valuation

The valuation method used was a Sum-of-Parts valuation, valuing separately NOS' operations and its 30% stake in ZAP. Both parts were valued using a Discounted Cash Flows Model. Under this methodology I reached the target price of €6.46, and accordingly I have a BUY recommendation for the stock, with a 31.5% upside to be materialized by the end of 2015. Note however that this target price does include the expected cash-in from a dividend payment to occur in 2015 as well as a probability weighted scenario analysis.

## Main Assumptions

My DCF valuation is subject to be discounted at the weighted average cost of capital, under the current market weights of debt and equity in the firm, respectively 30% and 70%. In order to obtain the expected return on these two sources of capital I will use a CAPM approach, and all the accordingly needed inputs.

Starting with risk-free, although the 10y German Bund yield is usually used as a proxy for a risk-free long-term investment in Europe, I believe today's environment of unprecedentedly low interest rates biases down that rate considerably, as it currently stands at 0.9%, and three/four years for now that will no longer hold. So, as rates go up a couple of years from now I would end up with a very ill representation of a risk-free investment for the major part of the time frame involved in my valuation, as I likely could re-invest without risk again at a higher rate, 10 years from now. Given this unprecedented low-rate period we are currently in, I took instead the last ten year average of that same 10y German Bund yield, which generated a risk-free rate of 2.6%. Alternatively, I could have used the current yield on the 30y German Bund as the risk-free rate, 1.32%<sup>1</sup> on my model. However, that rate has considerably lower trade volumes, making it less liquid and therefore a poorer choice as a proxy for the risk-free rate. Hence, despite using the last ten year average of the weekly 10y German bund yields as the risk-free rate in my base case scenario, I acknowledge the possibility of using the alternatives in the table to the left, by matching separately each risk-free rate hypothesis with the corresponding discount rate.

**Table 1 – Risk-free rates and the correspondent WACC**

	Risk-free	WACC
Base Case Scenario	2.63%	8.70%
Current 10Y Bund Yield	0.50%	4.98%
Current 30y Bund Yield	1.32%	6.42%

Source: NOVASBE Research;

Bloomberg

\* Rates are as of January 2<sup>nd</sup>, 2015

Also, by regressing the returns of NOS on the MSCI World Index I obtained a Beta on the stock of 0.90 for the last 3 years. Notice that prior to the NOS stock, I am taking the ZONOP and prior to the merger the ZON Multimédia stock, as considering only the company after the merger effectively translated into a new stock would be too few observations, thus yielding a statistically non-robust Beta. Alternatively, I looked at the Beta of comparables in the Portuguese market, Portugal Telecom and Sonaecom. Their Betas against the MSCI World Index were 1.21 and 0.84, respectively. However, I have chosen not to factor in this Betas in my cost of equity calculation for NOS. This is because both companies' excess returns in the later stages of my samples have very little to do with the perceived risk NOS will have going forward as a cable/telecom carrier company in Portugal – Portugal Telecom

<sup>1</sup> As of January 2<sup>nd</sup>, 2015

listed in the PSI20 since the Oi-PT merger is a holding-like company that holds 25.6% of Oi. The behaviour of its price is driven by Oi's performance (thus tied with Brazilian telecom market) and more importantly by evolution of bid's made by Mrs. Isabel dos Santos. As for Sonaecom, once the owner of Optimus which is now a part of NOS, ever since the merger took place is a company much more directed at the IT consulting and media publishing businesses. Thus, both cases would fare a poorer estimation of NOS' systematic risk. Considering the historical market risk premium since 1946 according to Siegel (2005) of 6.27%, I obtained a cost of equity of 8.38%.

As for the cost of debt, I started off by estimating a credit rating for NOS through Moody's credit rating methodology for the telecommunications industry<sup>2</sup> and applied to NOS, as NOS does have public trading bonds but not only are they a scarce sample (only two bonds), they are also not graded by any credit rating agency. My estimations yielded a rating of Baa3 (the lowest of investment-grades, equivalent to BBB- on S&P's scale). However, as NOS' cash flows are generated in excess of 90% in Portugal, they are undoubtedly subject to a sovereign risk as well, that is not entirely taken into account in Moody's methodology<sup>3</sup>. Thus, by equalling weighing NOS' estimate and the Portuguese Sovereign credit rating (Ba1), I obtained NOS overall credit rating of Ba1, the first grade to fall under the non-investment category. Then I associate the credit rating with the average market implied credit spread on the Ba1 rating, 3%. The rating is also associated with an historic probability of default (0.67%<sup>4</sup>) that I equally weight against the European telecommunication industry default rate forecasted for 2014 by Moody's (0.9%<sup>4</sup>). Considering also Moody's historical recovery rates by debt types, I get an overall amount-weighted recovery rate of 66.3%. Adding that to the risk-free stated above (2.62%), I arrived at a cost of debt of 5.61%, which consequently yields a WACC of 8.70%. The inputs taken for the WACC are stated on the table to the left. The cash flow I project for the firm are the following:

**Table 2 – Inputs for the WACC**

Risk-free	2.63%
Beta	0.905
Market Risk Premium	6.27%
Target D/EV	31%
Target E/EV	69%
Re	8.30%
Rd	5.61%
WACC	8.70%

Source: NOVASBE Research

**Table 3 – NOS Forecasted Cash-Flows (Under Base Case Scenario) in €000'**

FCF	2015E	2016E	2017E	2018E	2019E	2020E
EBIT	228,963	247,172	278,157	332,116	367,895	402,377
Income Tax	-68,689	-74,152	-83,447	-99,635	-110,369	-120,713
Tax Adjustment	13,814	15,185	17,605	21,881	24,704	27,446
NOPLAT	174,087	188,206	212,315	254,363	282,231	309,110
Depreciation	336,154	335,807	325,243	313,271	303,085	295,896
<b>Gross Operating CF</b>	<b>510,241</b>	<b>524,013</b>	<b>537,558</b>	<b>567,633</b>	<b>585,316</b>	<b>605,006</b>
NWC requirements	-34,684	-616	-334	-1,083	-1,166	-1,244
CAPEX	-2325	-70807	-80243	-68271	-48188	-50896
<b>FCF</b>	<b>113,629</b>	<b>258,396</b>	<b>292,224</b>	<b>321,550</b>	<b>329,253</b>	<b>358,761</b>

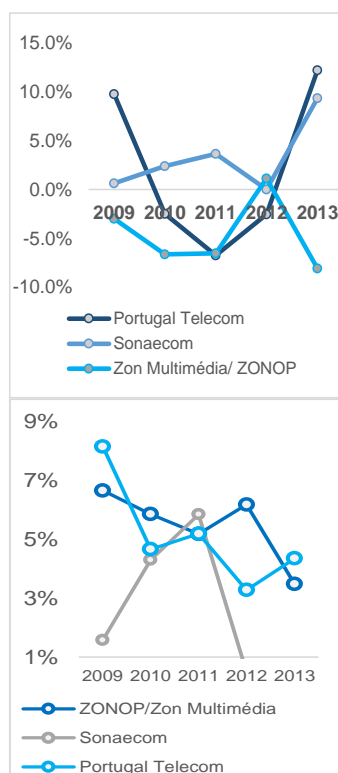
Source: NOVASBE Research

<sup>2</sup> Moody's Investor Service (2010) Rating Methodology - Global Telecommunications Industry

<sup>3</sup> Moody's factors for the estimation of NOS' credit rating and the score attributed to those same factors are detailed in the appendix

<sup>4</sup> Annual Default Study: Corporate Default and Recovery Rates, 1920-2013, Moody's

**Chart 1 – Sustainable growth rates and ROIC for Portuguese Telco Operators (%)**



Source: Company Information; Bloomberg

Regarding the Terminal Value, I project the free cash flow generated in perpetuity, growing at my estimated long-term sustainable growth rate  $g$ . The long-term growth rate I have chosen is 1.5%. I have chosen this growth rate as I believe in a country like Portugal with very modest growth expectations going forward, even if I would take the expected long-term inflation rate to be maintained by the ECB at 2%, that would still represent an overestimation, since the Telcom market overall is a declining market as I show in the “Market Overview” section of this report. Ultimately, I do not believe Portugal will keep the inflation rate in-line with the Euro-zone as whole, as it has been the case recently. Notice I have left out the sustainable growth rate. This is mostly because, historical speaking the sustainable growth rate for telecom companies in Portugal has not been a good proxy for their ability to growth in the very long-term (as they should grow the least at inflation forecasted for the following periods), as shown by the erratic top line illustrated on the left. Also, looking at the ROIC of Portuguese competitors, we can confirm that NOS (former ZON and ZONOP) has had for most years the superior ROIC. This is particular relevant to ensure value creation in the perpetuity (growing at least at the inflation rate) – ROIC is more resilient than growth. Thus, since NOS exhibits higher ROIC than its peers, it is more likely to create value in the long-term than they are.<sup>5</sup>

As for the Terminal Value cash flow per say, I firstly I make the revenues from the last projected year 2023 grow at  $g$  stated above and practice the long-term EBITDA margin I have projected for the company of 41%. Afterwards, I estimate Depreciation as 97% of CAPEX, since I have a guidance for a steady state CAPEX for the company of 17% of Revenues and Depreciation has been in my model on average 97% of CAPEX. I also factor in the net working capital requirements growing at the sustainable growth rate, take out the CAPEX estimated as just mentioned in the end get the first FCF of my perpetuity. Table 4 on the left summarizes the estimations mentioned above.

**Table 4 – Terminal Value Cash Flow (Post-2023)**

EUR m	
Revenues	2,004
EBITDA Mg	41%
EBITDA	822
Depreciation	334
EBIT	488
EBIT*(1-t)	366
Depreciation	334
NWC Req.	-2
CAPEX	341
FCF	361

Source: NOVASBE Research

## ZAP

As I mentioned above, I value separately the 30% stake NOS has in African Telcom company ZAP. ZAP is a joint venture, held 30% by NOS and 70% by SOCIP – Sociedade de Investimentos e Participações, S.A. (wholly controlled by Mrs. Isabel dos Santos) which offers satellite Pay TV in Angola. ZAP has a leadership in terms of Portuguese-spoken content in the Angolan market, and has its own home produced shows. ZAP has innovated in the market also through the improvement of its set top boxes and the introduction of HD contents. Also, ZAP is the exclusive operator of sports premium channel, SportTV Africa.

ZAP has seen its customers grow 70% in 2013, along with EBITDA growing 257% to €47.39m at end of the year exchange rates and for the first year turning a profit. Given ZAP strong presence in a considerably undeveloped telcom market, I expect subscribers growth rate to be very high, backed both by population growth in Angola as well as significant (still a very undeveloped market in this front) growth of Pay-Tv penetration,

<sup>5</sup> Bing Cao, Bin Jiang, and Timothy Koller (2006) Balancing ROIC and growth



which below 4.2% in 2012. This customer base growth affects revenues on two parallel sources, one the usual monthly fee associated with providing Pay-Tv services; the other which differs from the usual business model – the sale of set-top boxes to its clients. Notice however that this should be a one-off revenue, selling the set-top box once, as they become new clients of ZAP.

However, this growth should be accompanied with corresponding growth both in NWC capital requirements and CAPEX. I estimate the former to be 5% of yearly increase in revenues. As for CAPEX, according to information provided by NOS, it amounted to 6% and 8% of sales in 2012 and 2013. Although I recognize this number should increase as customer base grows, it should never reach a steady state that NOS CAPEX will, for example, the mentioned 17% of revenues. This is because ZAP business is a satellite based one, therefore the CAPEX it incurs in is driven by the rental of satellite “space”, in other words paying for the capability of sending out a signal out to more homes. It does not, however require any physical investment in network like the fibre in Portugal does, for instance. Therefore, I estimate CAPEX never to surpass 10% of sales. The margin of ZAP should tend in the long-run to the EBITDA margin of close to 40%, as this is the low-end average for satellite Pay-Tv providers in the market. All in all, in the following table I summarize my projections for the proxy cash flow to be generated by ZAP in the future:

**Table 5 – ZAP's Forecasted Cash Flow for two scenarios**

	2015E	2016E	2017E	2018E	2019E	2020E
EBIT	65.0	78.9	92.8	106.6	120.1	132.7
Taxes on EBIT	22.8	27.6	32.5	37.3	42.0	46.4
CAPEX	27.7	33.5	39.5	45.4	51.1	56.4
WC Requirements	3.1	3.3	3.3	3.3	3.2	3.0
<b>FCF (base case)</b>	<b>10.9</b>	<b>13.7</b>	<b>16.7</b>	<b>19.7</b>	<b>22.6</b>	<b>25.5</b>
<b>FCF (one-off depreciation)</b>	<b>9.3</b>	<b>11.7</b>	<b>14.2</b>	<b>16.7</b>	<b>19.2</b>	<b>21.7</b>
<b>Actual FCF</b>	<b>10.3</b>	<b>12.9</b>	<b>15.7</b>	<b>18.5</b>	<b>21.3</b>	<b>24.0</b>

Source: NOVASBE Research

In order to discount them to the present, I firstly take the same risk-free rate as for NOS, the average yield on German 10-year Bunds, 2.63%. I consider the same rate because I am projecting the cash flows based on Euro-denominated inputs, therefore they should be subject to the return for a risk-free investment in that same rate; after translating future cash flows at the EURUSD forward curve (later in this topic, I will explain the additional exchange rate risk implied in this reasoning). Afterwards I estimate the cost of equity, through the CAPM, estimating a levered Beta for ZAP. For doing so, I took 6 listed African telecommunication stocks – Econet Wireless, Telekom Networks Malawi, MTN Group, Safaricom, Vodacom Group and Sonatel and graphed their excess returns against the MSCI World Index. After excluding the outliers based on the judgement of a 95% confidence interval on the Betas obtained, I de-levered those Betas at the respective company's market debt-to-equity ratio and then re-levered the average Beta at ZAP's target capital structure – 80% Equity, 20% Debt, as quoted by NOS's guidance. This process yielded an equity Beta for ZAP of 0.83.

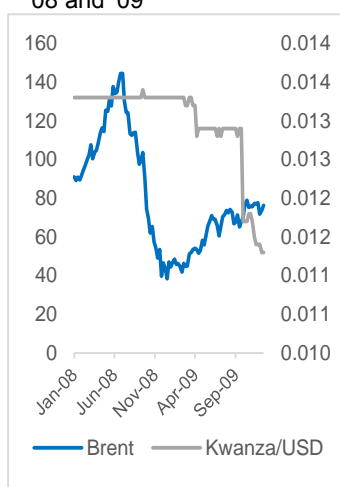
**Table 6 - Levered Betas against MSCI World Index**

<b>Africa</b>	
MTN Group	0.632
Safaricom	0.462
Vodacom	0.795
<b>Europe</b>	
Telefonica	1.307
Orange	1.273
Numericable	0.87

Source: Bloomberg

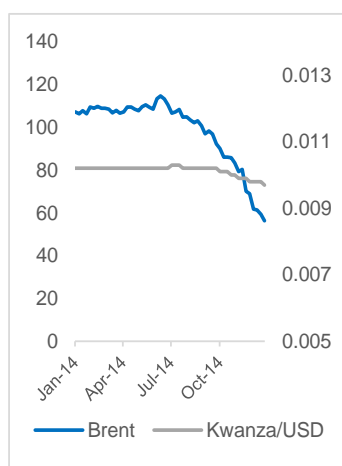
\* Betas taken from weekly returns in the past 3 years

**Chart 2 – Brent Price (\$) and Kwanza/USD FX rate in '08 and '09**



Source: Bloomberg

**Chart 3 – Brent Price (\$) and Kwanza/USD FX**



Source: Bloomberg

This Beta should include any form of systematic risk ZAP, be it originating from the cyclicity of their businesses or from their operational leverage. When looking at European telecoms counter-parts, they have on average a higher Beta against the MSCI World Index, as shown on the table to the right. This evidence of lower systematic risk for African telecoms can, in my opinion, be explained two distinct factors. Firstly, the fact that the African Telecoms listed do not have fiber-to-the-home services included in their Pay-Tv offers, instead they services are offered via satellite or they are just mobile operators. The former businesses have a smaller need for capital expenditure and a lower share of costs are fixed as they do not need to invest as much infrastructure, which would account for the lower operational leverage. On the other end, as I obtained the Beta against the MSCI World Index, it may be that African telecoms are subject to the different business cycles than the markets which are more relevant to the that index – U.S., United Kingdom and Japan make up 74% of the index – being the former more affected by commodities shocks and Chinese imports than the latter, for instances. Therefore, I am comfortable with the lower systematic risk inputted in to my valuation of ZAP. For a market risk premium equal to the one used in NOS' valuation of 6.27%, I obtained a cost of equity of 7.9%.

As for the cost of debt, given the scarcity of rating information and the shortage of comparables, I took Bloomberg's market value derived cost of debt estimates for the same comparables I used to estimate the Beta – MTN Group, Safaricom and Vodacom – and obtained an average cost of debt 7.7%. All in all I obtained a WACC of 7.9%. This rate seems too low for a cable company in a frontier market, but the issue here is that the low market-driven risk of the company can be justified by the factors listed above: lower operational leverage and distinct business cycles than the ones captured by MSCI World Index; this makes up for a low systematic risk for a holder of a geographically diversified portfolio. However, in order to ensure the full capture of the risk of the company (and not exclusively the systematic one), I factored in a scenario into my cash flow projection of a specific risk of the company – a one-off depreciation of the Kwanza against the dollar.

Although the company incurs in costs both in Angola Kwanzas (AOA) and in dollars<sup>6</sup>, the Angola Kwanza is pegged to the USD by the National Bank of Angola (BNA), which usually ensures a stable value of the Kwanza. Currently, the currencies trades at 103 Kwanza's per USD. However, we have witness a in the past, namely in 2008-2009 when the oil price dropped approximately 60% between July and December 2008, a loosening of the currency peg that allows the Kwanza to depreciate against the dollar - the Kwanza depreciated close to 15% in the first 9 months of the year. Given the currently low oil prices - Brent is at \$56 from \$108 just 5 months ago - one must factor in the likelihood of a similar devaluation happening again. The charts to the left show how the Kwanza is yet to make a sizable devaluation to match the Brent price collapse.

However, data suggest Angola is more resilient to oil price drops than it was in 2009. I base my assumption firstly on lower oil price expectations in public budgets (budget for 2015, currently being discussed in Parliament assumes an \$81-year average for the Brent vs. \$98 in 2014<sup>7</sup>). Secondly, the economy is more diversified, as oil sector accounts for 40% of the

<sup>6</sup> The trend has been a decrease of the payments made in USD, as the BNA have been enacting "de-dollarization" policies in the Angolan economy since 2010; encouraging the use of Kwanza's



country's GDP, whereas it was 60% in 2008. Lastly, Angola's FX reserves are, given last data available, at \$28bn, which according to the Deutsche Bank should cover more than 6 month of import. In 2008, they were below \$20bn. Still, I factor in a scenario of a 15% cash flow devaluation, with 50% probability, as I do not have a particular view on oil prices going forward, and this depreciation was the yearly adjustment the Kwanza suffered against the dollar for a similar magnitude price drop in the Brent in 2008.

I am, however, confident that this does not hurt my buy recommendation on NOS, has even for a virtually impossible scenario of a 50% depreciation of the cash flows originating from ZAP (one in equal degree as the adjustment verified in the last 6 months in the oil price), NOS's fair value would decrease €0.05/share compared to my base case; still with an upside to its current price comfortably in excess of 15%. Assuming a long-term growth rate of 3.5% - quite conservative given that even in 2023 Pay TV market will hardly be mature in Angola the very least due to population growth; and that inflation rate has not been below 4% since 1990. I obtained an equity valuation of ZAP of €470m. Therefore, I value NOS' 30% stake in ZAP at €141.1m or €0.28/share. I am also excluding from ZAP's valuation a project that will sure be value-creating for NOS – ZAP's announced investment in broadband network in Angola. I am confident it will be NPV-positive for NOS because it is exclusively financed with ZAP's funds; and because the network investment will be made only in selected regions of Luanda, not in a widespread manner across country, which creates room for a region-on-region appreciation of the value-creation.

## Sensitivity Analysis

In this sub-section of my report I conduct a synthetic sensitivity analysis to the two most value-impacting inputs of my valuation on NOS, the weighted-average cost of capital and the long-term growth rate of my perpetuity for the terminal value.

**Table 7** – Sensitivity analysis for the WACC and long term g

	7.0%	8.0%	8.7%	9.5%	10.5%
0.5%	7.43	6.47	5.94	5.44	4.92
1.0%	7.81	6.74	6.16	5.60	5.05
1.5%	8.27	7.05	6.39	5.79	5.19
2.0%	8.82	7.41	6.68	6.00	5.34
2.5%	9.48	7.84	7.00	6.25	5.52

Source: NOVASBE Research

(1) Analysis is done for the Base Case Scenario valuation

The conclusions that this table allows to draw is that only under a scenario where the average cost of capital is above 10% and NOS grows in perpetuity at 0.5%, substantially inferior to the expected long-term inflation rate for a Euro-zone country does the target price of NOS for the end of 2015 falls below its current price of €4.95. This evidence further strengthens my buy recommendation, as it suggests only in a scenario of very-long term stagnation for Europe and permanently high sovereign/cyclical risk associated with Portugal would NOS fail to produce a upside for its holder.

<sup>7</sup> Deutsche Bank Research

## Company overview

NOS is a cable and telecommunications company that offers Pay-Tv, broadband, fixed voice and mobile services in the Portuguese market. Its activities also include the cinema distribution and exhibition as well as content creation and sale through NOS-owned Pay-Tv channels.

### Brief History

NOS' origins date back to 2007, when the market incumbent Portugal Telecom spun-off its subsidiary PT Multimédia, which included the called TV Cabo operations and overall was the main materialization of Portugal Telecom's effort to implement multi-media strategies. Since its inception and renaming as Zon Multimédia in 2008 as a completely independent body from the incumbent firm that NOS has been the leader in the Pay-Tv market. It also became the first internet operator to offer broadband services to its costumers. More recently, in 2013, Zon Multimédia merged with Optimus to form Zon Optimus which was one year later re-named NOS.

Optimus was a mobile, broadband and voice operator of telecom and media company Sonaecom. When Optimus integrated Clix in 2010 it became the first operator to fully integrate all the fixed services, including Pay-Tv.

### Business Units

- Telco

The Telco business is the core activity of NOS. This business unit includes the Pay-TV, Internet and voice services, both fixed and mobile, offered by NOS in Portugal.

NOS offers bundles of the services above that range from duple play "NOS Dois" with Pay-Tv and 1 mobile SIM card for €29.99, to its premium offer "NOS Cinco", priced at €79.99 since July in a promotional manner that includes not only mobile, Pay-Tv, fixed voice and broadband but also 5GB of mobile broadband. However, the offer that most likely contributed to the commercial performance of NOS in the Telco sector this past quarter was the creation of a lower pricing point convergent offer – "NOS Quatro Light". For €49.99, customers get a lower end Pay-Tv package (126 channels), 30 Mbps in fixed internet, unlimited fixed voice and a single SIM card. Overall, NOS has a portfolio of offers for wide range of customers, from premium to discount (distinguished by amount of channels, internet speed and number of SIM cards<sup>8</sup>).

Still, NOS' Pay-Tv offer has some differentiation power over its competitors since the IRIS service was the first to have a "time-warp" function that automatically records the

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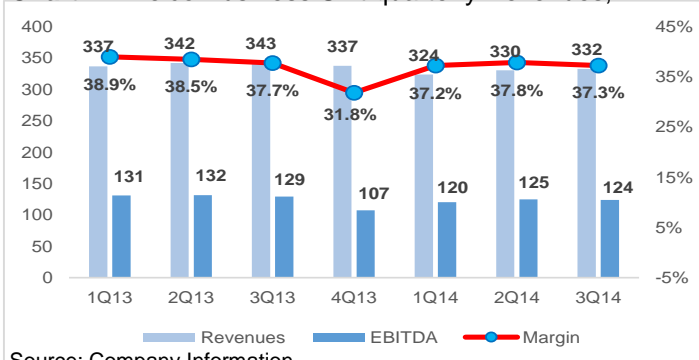
<sup>8</sup> NOS offered for the first time this quarter a 4Play offer priced at €49.99, "NOS Quatro Light". This bundle has lower internet speed, but it now matched Vodafone's price range. Broader description of pricing is done on the segment "Competition" of this report

programming from the past 7 days. NOS' IRIS and Kanguru (Optimus mobile broadband service prior to the merger) were also awarded product of the year in their categories by an independent entity.

NOS had, as of 3Q14, approx. 300 thousand convergent customers, representing already 24% of its Pay-TV subs. As for mobile, NOS has approx. 3.5 million subscribers.

Note however that the Telco business unit includes the business segment as well, both for small and medium enterprises and for large corporate accounts. Business RGUs as a whole grew over 6% on year-on-year basis in 3Q14, totalling 1023 thousands RGUs. This can be mostly attributed to a higher commercial spending on this front, a better integrated offer and an increasing geographic coverage. As far as large corporate clients are concern, as I mentioned in my 3Q results preview and post-view, NOS has made a considerable progress by snatching from the incumbent Portugal Telecom the larger accounts in the market – Caixa Geral de Depósitos, BPI and the Ministry of Health are some examples of NOS achievement in this sector. In a further section of this report I discuss the profitability potential impact of these contract on NOS' financial performance. The graph below summarizes this business unit in the past quarters.

**Chart 4 – Telco Business Unit quarterly Revenues, EBITDA (€m) and Margin (%)**



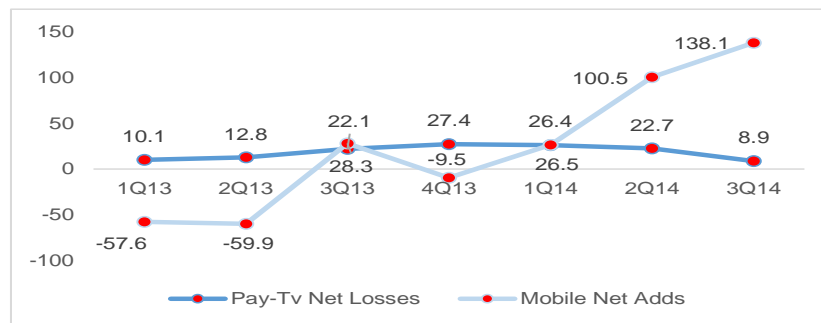
Source: Company Information

As shown above, in most recent quarters NOS has struggled with revenue growth, essentially due to the aggressive pricing by Vodafone in its fixed bundle offers. However, as NOS becomes increasingly more integrated, the EBITDA erosion effect has been mitigated in the last 2 quarters. The numbers that better illustrate NOS commercial rebound is the decrease in Pay-Tv customer losses, as well as the gain in market share in mobile services in 2014. Overall, these provides a better outlook going forward, as NOS convergent offer is paying off.

NOS has 300k convergent customers in 3P&4P offers

And over 1 million business RGUs

Vodafone's aggressive pricing hurt NOS Telco performance...

**Chart 5 – Pay-Tv Net Losses and Mobile Net Additions, in thousands of subscribers**

Source: Company Information

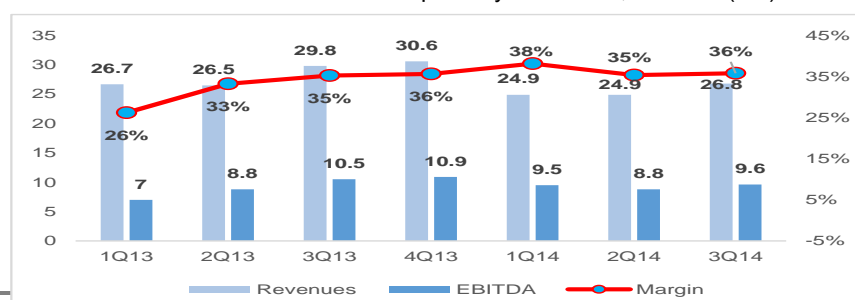
... But there is evidence  
of commercial rebound  
in 2014

## ▪ Cinema and Audiovisuals

NOS Cinema exhibition  
revenues declined 20% Y-o-Y  
in 3Q14

The cinema and audio-visuals business unit includes the cinema exhibition and distribution in Portugal, Spain and Mozambique; the sale of Pay-Tv and video-on-demand content rights.

Currently, NOS has a 63% share of box office revenues in Portugal, according to the Portuguese Institute for Cinema and Audiovisuals, selling close 2 million tickets in 3Q14 at an average revenue per ticket of €4.7. NOS cinema exhibition segment has now 214 screens in total, with the addition 5 screens in Forum Algarve. Noteworthy is also the opening of the first IMAX screens in NOS cinema in 2Q13, which has 148k customers to date. Still, this is a segment in clear decline with revenues falling 20% on year-on-year basis in 3Q14. As for the audiovisuals segment, NOS has a home video market share of 59% and 57% for the cinema distribution. The leadership NOS holds in the cinema distribution market is further illustrated by NOS having distributed 6 out of the 10 most successful screenings in 3Q14. Also, the movie & series channels that NOS offers as a content seller have over 500k subscribers, 60% of which in Africa. The audiovisuals segment was flat this quarter, continuing this no-growth trend already exhibited in past quarters. The table below summarizes the recent performance of this unit. The company attributes the 20% y-o-y decline this past quarter to the absence of blockbusters - in 3Q13 the movie “The Gilded Cage” was being displayed. This movie was a great success, selling over 2x times the tickets sold on 3Q14 most viewed movie, “Lucy”. Yet this is evidence of a structural decline in this sector as I will showcase in our market overview section below. Also, if we take into account the volume added from the 5 new screens added, then total ticket sales actually declined 25% y-o-y in 3Q14.

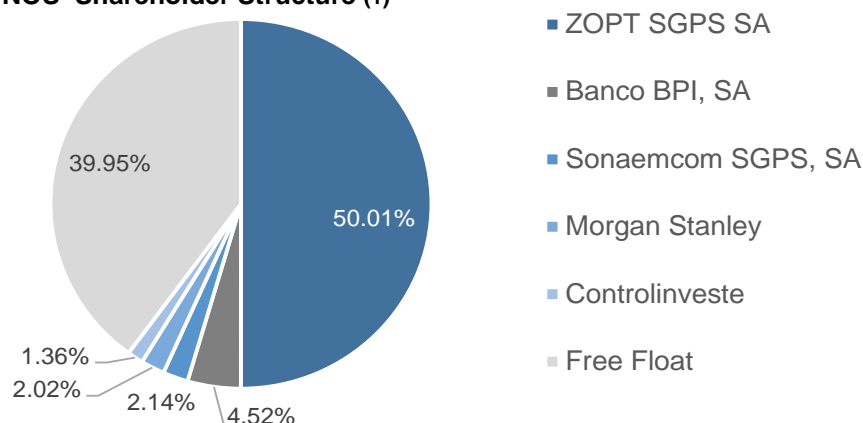
**Chart 6 – Audiovisuals Business Unit quarterly Revenues, EBITDA (€m) and Margin (%)**

Source: Company Information

## Shareholder structure

The most prominent shareholder is the ZOPT holding that owns a majority stake of 50.01%. ZOPT is a qualified holding that resulted from an agreement of its three controlling shareholders, Kento Holding Limited, Unitel International Holdings, both directly controlled by Mrs. Isabel dos Santos, and Sonaecom at the time of the Zon-Optimus merger. Therefore, Sonaecom holds an indirect share of 25% in NOS, along with a direct stake of 2.14%. The other reference shareholder currently holding a qualified stake in NOS is BPI, with 4.52% voting rights. The following summarizes the main stakes in the company.

**Chart 7 – NOS' Shareholder Structure (1)**



Source: ANACOM; NOVASBE Research

(1) Aside from Controlinveste, because of its status as an important stakeholder in this market; the chart only includes stakes above 2%

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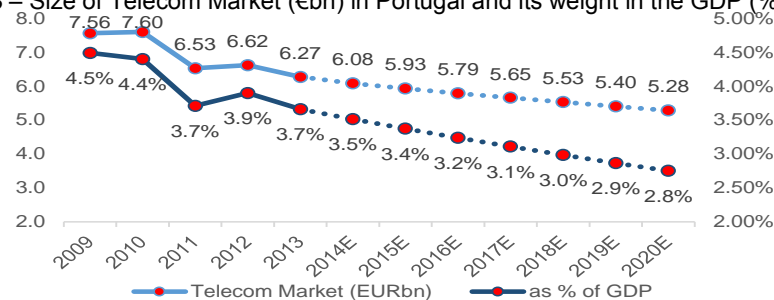
Here it is also important to highlight the recent reduction in stakes by historically important shareholders for the company. In the past weeks, Controlinveste reduced its stake in NOS from 2.90% to 1.36%, having sold over 4.7 million shares. This is quite relevant because these shares are attributable to Joaquin Oliveira, a reference shareholder and board member not only for NOS but overall a major stakeholder in the Portuguese Pay-Tv business as a whole. This disposal of shares are in my view positive because the shares owned by Controlinveste created an overhang risk for NOS' shares, as the intention by Mr. Oliveira to reduce his stake in NOS was fairly known in the market. The same risk was present in Joe Berardo's stake, which he disposed of last summer, another very relevant shareholder in company's history. I believe that these two disposals have been contributing to the positive performance of NOS shares this past weeks, since they face a much lower overhang risk.

# The Sector

## Market Overview

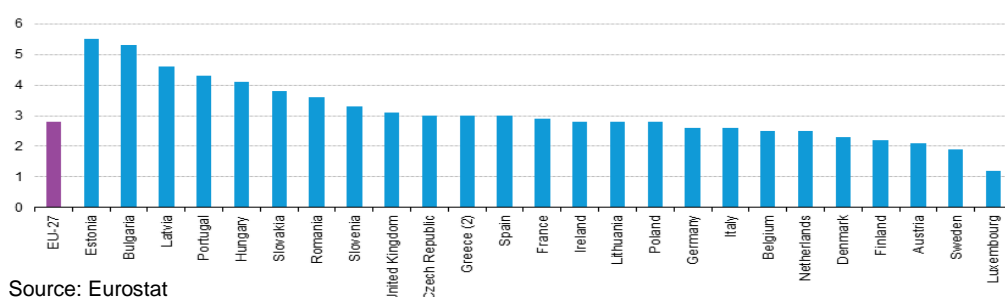
The telecommunications market has experienced a significant reduction in the past years, going from a €7.56bn market in 2009 to a €6.27bn market in 2013<sup>9</sup>, which translates into a compounded annual growth rate (CAGR) of -3.7% across that period. This is a particularly negative picture if we consider the telecommunications market fell at a faster rate than the GDP, which had a -1.5% CAGR for the same period, making the telecommunications sector weight in the GDP decrease. Yet, according to ANACOM, approximately a third of the decrease in the telcom market was due to regulatory reasons, that is, difference in what counts as telecommunications expenditure. However, that would yield a net CAGR of -2.4% for the sector, which is still worse than the performance for the economy as a whole. The following table summarizes the context described above as well as my forecasts.

**Chart 8 – Size of Telecom Market (€bn) in Portugal and its weight in the GDP (%)**



Source: ANACOM; NOVASBE Research

**Chart 9 – Telecommunication Expenditure as % of GDP in 2013**

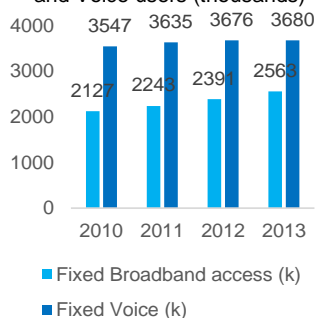


Source: Eurostat

<sup>9</sup> ANACOM



**Chart 10 – Portugal Fixed BB and Voice users (thousands)**

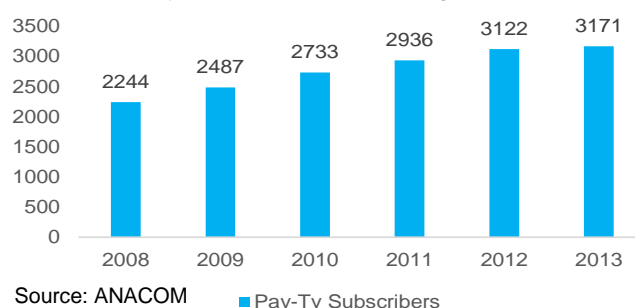


Source: ANACOM

Going forward, I expect the telecom to continue its downward trend, although at a much less steep rate than in past years, dependent on overall economic recovery. My belief stems from the fact that the more developed economies in the EU, have lower figures for telecom expenditure as % of GDP than Portugal, as shown in the following table. We can see that for instance, Spain, France and Italy, already in 2010 had fallen below the 3% threshold. And looking at the richer economies, the Scandinavian countries, for example, they actually are around the 2% mark. Therefore I believe the trend for the not-as-developed players in the EU, such as Portugal, is to see that weight of telecom expenditures in GDP decreasing. Overall, that would translate in a Portuguese telecom market experiencing a decrease of roughly 2% CAGR for the 14-20E period.

On a more bottom-up approach, however, there are still some opportunities for a telco carrier to grow in Portugal, at least in terms of subscribers. In terms of fixed broadband penetration, for example, there has been a significant increase in subscribers in the Portuguese market - between 2008 and 2013, fixed broadband subscribers registered an 8.6% CAGR, as shown on the left. And, looking at a European picture, penetration of fixed access to broadband still lags behind not only main European players and the EU-27 average considerably, but also peripheral economy peers. Greece is the only from selected countries that had a lower Pay-Tv penetration. This suggests that telecom operators in Portugal may continue to benefit from this increase in subscribers. Regarding Pay-Tv, the Portuguese market has also been experiencing growth in terms of subscribers. Since 2008, Pay-Tv subscribers grew at a 7.2% compounded annual growth rate.

**Chart 11 – Pay-Tv Subscribers in Portugal (thousands)**



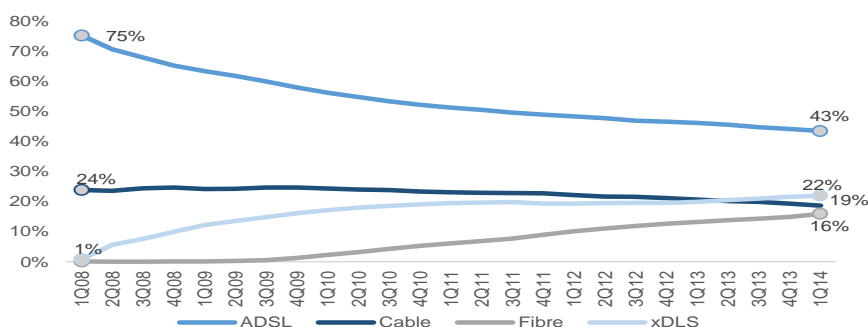
Source: ANACOM

Note however, that although Portugal Telecom is the telecom incumbent in the Portuguese market, NOS origins are TV Cabo, which at the time was the only Pay-Tv subscriber. Thus, NOS is the historically leader in this market, where it has a 45% market share as of this 3Q14, according to ANACOM. Therefore, this increase in size of the market does not benefit NOS directly, and its focus should be more on up-scaling Pay-Tv subscribers to higher priced bundles for increase Pay-Tv subscribers in terms of volume, as elaborate in later stages of this report.

As far as mobile sector is concerned, the penetration rate in Portugal are very high – according to Eurostat, Portugal as more than 1.5 mobile SIM card per inhabitant since 2010, but it continues to grow at approx. 1.7% annual rate in the past 3 years. Seen as they are already much more SIM cards that habitants, there is not growth opportunity in terms of volume for this sector.

In spite of that, there is a more relevant trend in the mobile market according to ANACOM. That is the increasing preference of consumers for pre-paid “all-you-can-eat” contracts, with free calls and messages and higher levels of internet data. Pre-paid contracts were 29% of consumer mobile services in 3Q13 vs. 40% in 3Q14. Therefore, this represents an opposing force to the pricing pressure from Vodafone that could potentially drive ARPU down.

**Chart 12 – Pay-Tv Access Technology (weight on total subscribers, %)**



Source: ANACOM

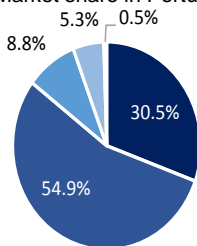
Also, it is important to mention that there has been a significant change in the way the Pay-Tv service arrives at consumer's homes. Cable and satellite and losing subscribers, and being increasingly substituted by fiber (FTTH, or fiber-to-the-technology). For example, this past quarter, subscribers for Cable and satellite decreased -2.9% and -5.8% on a year-on-year, respectively; whereas DSL and Fibre grew 11.2% and 29.8%, respectively. As of 3Q14, Fibre already represented 17.8% of total Pay-Tv subscriptions. The graph above better illustrates this trend.

All in all, telecommunication sector in Portugal should experience modest decrease rates going forward, even under the assumption that the recovery in the economy as a whole is verified. Still, there are particular sectors, namely fixed and mobile broadband, where there is still room to grow in volume. Clearly, NOS financial performance will not be driven by an overall sector expansion. I believe NOS story going forward is more an issue of who better addresses the convergence trend in the market. According to ANACOM, in 5 years, convergence should represent over 30% of the telecom market, therefore leadership in convergence will most likely define a new market leader in this sector.

## Competition

NOS origins go back to once monopolist TV Cabo in the Pay-Tv segment, so naturally NOS is the dominant player in that market with a market share of 44.5%. However, in the recent segments for Fixed Voice and Broadband, the incumbent Portugal Telecom and its MEO-named services take the leadership as shown below. Note that all the market shares below are as of 3Q14 according to ANACOM.

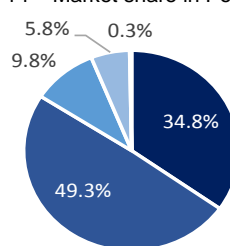
Chart 13 – Market share in Portuguese Fixed Voice



■ NOS ■ PT ■ Vodafone ■ Cabovisão ■ Others

Source: ANACOM

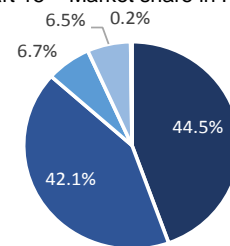
Chart 14 – Market share in Portuguese Broadband



■ NOS ■ PT ■ Vodafone ■ Cabovisão ■ Others

Source: ANACOM

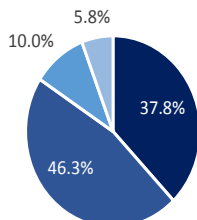
Chart 15 – Market share in Portuguese Pay-Tv



■ NOS ■ PT ■ Vodafone ■ Cabovisão ■ Others

Source: ANACOM

Chart 16 – Market Share in bundle offerings in Portugal, %



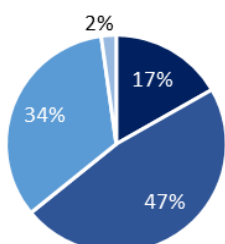
■ NOS ■ PT ■ Vodafone ■ Cabovisão ■ Others

Source: ANACOM

However, going forward, I believe that the most important market share to look at, is the one referent to bundle offers, as the trend in this market is to observe an increasing convergent offer (300k subscribers increase from 3Q13 to 3Q14). In graph to the left I show market shares for the bundles offers together (from 2 play to quintuple play). The incumbent once again takes the lead, but here it is also important to mention that PT was the first one to launch triple play and quadruple play offers (M4O), the latter in January 2013. At the time, the offer was clearly the most competitive in the market, and it translated into 172k convergent subscriptions in its first 7 months of activity, 40% of which were new customers.

In terms of pricing, there is clear distinction in the triple play bundle offering Pay-Tv, Broadband and Fixed Voice. On one side, the two players who have been in these markets the longest (Pay-Tv, BB and Fixed Voice), PT (MEO) and NOS; and on the other side the companies which are still trying to gain scale, Vodafone and Altice-owned Cabovisão. The former price the mentioned triple play bundle at €39.99 during the first 24 months of their contract, whereas the latter priced them at respectively €25.99 and €24.99. Notice however that the length of that pricing offer for Cabovisão is only 6 months, as opposed to the 24 month length its competitors practice. This represents a 35% cheaper service offered by Vodafone.

Chart 17 – Market Share in mobile service, %



■ NOS ■ PT ■ Vodafone ■ Others

Source: ANACOM

Vodafone's (and Cabovisão's) should not be interpreted, however, as an attempt to make overall prices go down via a war price. As identified above, there is a strong trend in the market towards convergence (offering all services, mobile and fixed, under a bundle). Looking at Vodafone's client structure as illustrated above, there is a significant imbalance between mobile customers and fixed customers for Vodafone – market shares above provided by

ANACOM translate that bundle clients are only 5% of mobile customers for Vodafone, vs. 17% for Portugal Telecom and 39% for NOS. Market share in bundle offerings stated above on its own illustrates Vodafone's weakness in this sector. This constitutes a disadvantage to Vodafone, as it is a smaller player in the service to which the market should converge to in the future (bundle subscribers grew 10% y-o-y in 3Q14). Therefore, I believe Vodafone should only keep this aggressive pricing until it reaches a number of subscribers or market share (how many/much is the million dollar question) in this service that makes it a stronger player in the bundle market as well. Especially because, as I illustrate in the "Revenues – enjoying convergence" section of this report, Vodafone's pricing is unviable for a triple play bundle.

Still, Vodafone has, in December 1st 2014, introduced a caveat in their pricing. In order to take advantage of the 7-day automatic rewind service (called time-warp), a customer needs to pay an additional €4 a month for the rental of the set-top box that has that functionality. Thus, in order to enjoy the same services as a given customer would in MEO or NOS, a Vodafone customer as to pay now €30.99. This reduces the price difference from 35% to 23%. Still a material difference for the average Portuguese household. This adds up to the €1 increase in their headline price from €24.99 registered in July. Overall, in less than 6 months Vodafone offers the same services for €5 more, which can give some indication of future change to the actual headline price. I elaborate on the feasibility of Vodafone's pricing in the section "Revenues – enjoying convergence" section of this report. In the other bundled offerings, that further include mobile services and mobile broadband, the pricing is very much in line across competitors. There are changes however in the number of channels and high-definition channels included in the packages as well as internet speed. The table below summarizes the pricing picture for the sector.

**Table 8 – Bundle Pricing for each operator, in €/month, as of December 1st**

Bundle/Operator	NOS	MEO (PT)	Vodafone	Cabovisão
<b>Triple Play ( TV+ Broadband + Fixed Voice)</b>	€ 39.99	€ 39.99	€25.99 <sup>(1)</sup>	€24.99 <sup>(2)</sup>
<b>Quadruple Play</b>	€ 49.99	€ 49.99	€ 49.80	-
<b>Quadruple Play (2 SIM cards)</b>	€ 59.99	€ 59.99	€ 59.70	-
<b>Quintuple Play (4P + Mobile BB)</b>	€ 79.90	€ 79.99	-	-

Source: ANACOM

1) Plus €4/month for set-top box with time-warp

2) Price valid for 6 months only, €39.99 after that

## M&A Context

Portuguese Telecom has been a very active sector in terms of deal flow this recent years. Following the Cabovisão-Oni deal and the Zon-Optimus merger in 2013, we have seen currently an intense speculation and concrete bids for Portugal Telecom's business (which is currently an asset of Oi). Recently, there has been a breakthrough – Oi announced it accepted Altice's bid for PT on December 5<sup>th</sup>, leaving the Apax/Bain consortium out of the race.

In my perspective, this news should have a positive read across for NOS. Assuming the regulator approves Altice's purchase of Portugal Telecom, we would see a shift in the competitive landscape of the Portuguese telecom market, as the number of player would go

**Table 9** – Market Share per segment (%) if Altice wins and is forced to sell Cabovisão to VOD

	Pay-Tv	Fixed Voice	Broadband
NOS	30.5%	34.8%	37.8%
Altice	54.8%	49.3%	46.3%
VOD + CBV	14.1%	15.6%	15.8%

Source: ANACOM; NOVASBE

down from 4 to 3. This should prove positive for NOS as it strengthens the likelihood of Vodafone easing its aggressive pricing policy in the near future as competitive pressure decreases. As I further elaborate below, the easing of pricing by Vodafone after 2015 is a key assumption implicit in my BUY recommendation and the Altice bid does make it more likely in my view.

Especially in the scenario that is considered more likely by market participants – a regulatory enforcement of Altice to sell Cabovisão to Vodafone. As I argued in the sub-section “Competition” above, Vodafone needs scale in order to forgo its aggressive pricing. If it were to add Cabovisão’s customers, Vodafone would be closer to a subscriber base comfortable enough to a profit-making pricing - 14.1% share in pay-tv; 15.6% in fixed voice and 15.8% in broadband. Still, I consider that any outcome from Altice/PT deal is positive for NOS when compared to the competing bid of the private equity consortium by Apax/Bain were to win, the picture would be different as you still keep a market with four players and thus the same competitive landscape in the sector.

Note however, due to the mentioned above or any other caveat imposed on the deal by the regulator, it should take at least 6 months for the deal to go through. For instances, Optimus/Zon deal had less overlap, as the first was essentially a mobile operator and the second an essentially fixed one and there were still regulatory interventions, especially as far as the network was concerned (Optimus was forced to honour its deal with Vodafone). The PT/Cabovisão deal has a higher overlap in terms of services – together, PT and Cabovisão would have 60.2% share in fixed voice, 55.2% in Pay-Tv; 52.1% in bundles and 48.6% in broadband. Thus, we should expect the deal to go through before July 2015.

On a parallel note, although closely related, there is the bid of Mrs. Isabel dos Santos, via the Terra Peregrin holding, to buy PT SGPS that is quoted in the Portuguese Stock Exchange. Before further developing this subject, it is relevant to make a distinction – PT SGPS, the company listed on PSI20 is a company which is not the same as the actual Portugal Telecom, Portuguese telcom market incumbent. The latter is at this stage viewed as a business unit of Oi (or the ex-future Corp Co.), whereas the former is simply a company with a 25.6% stake in Oi, awarded once the merger terms were renegotiated and the Rio Forte debt<sup>10</sup>, the precise security that lead to that re-negotiation of the terms of the merger. In that sense, what Mrs. Dos Santos is doing in practice is bidding for a 25.6% stake in Oi, and a possibility to prevent Oi to sell Portugal Telecom. Mrs. Dos Santos imposed a series of contingencies in her bid, being the main ones that PT SGPS would see its capital in the new merged company increase 10% and also that Oi would stop its asset disposal program, involving the sale of the Portugal Telecom business and the stake in Unitel, an African Telecom company. However, as of last December 23<sup>rd</sup>, Mrs. Isabel dos Santos has withdrawn her offer for PT SGPS. The withdrawal was on back of the request by Portuguese securities’ regulator CMVM that Mrs. Dos Santos should match her offer with the last 6 months VWAP<sup>11</sup>, €1.94. The bid stood at the time at €1.36, and Mrs. Dos Santos decided to withdraw her offer.

<sup>10</sup> Rio Forte Debt refers to a approx. €900m debt that PT contracted with the Rio Forte company/holding, a member of the failing Espírito Santo Group

<sup>11</sup> Volume weighted average price

## Comparables

Presently, there is a scarcity of comparable firms for NOS that operate in the same market. Altice is publicly traded but there are no multiples exclusive to its Portuguese assets, and the same story goes for Vodafone. And PT, as explained in the section above, is listed but it is holding-like company that controls 25.6% of Oi. Thus, and it should not be valued according to what it does not include, Portugal Telecom's Portuguese business. Therefore I take instead comparables across Europe to provide a better comparison.

Note, however, that NOS lies somewhere in the middle of what are considered (and valued as) Cable companies and Telecom Carriers. In the sense there are the firms that have the network that make broadband and TV arrive to each people's house, firms like Ziggo or Kable Deutschland; and then there the classical Telco Carriers that provide mobile and fixed voice services. The issue here is that NOS is a mix of both, even more so since the Zon-Optimus merger. Although there has been a trend towards convergence on both sides in Europe as well, there are still relevant discrepancies. Therefore, in order to create a really comparable market multiple for NOS I created an equally weighted blended multiple between cable companies and Telco's. The figures for all companies other than NOS are based on Bloomberg consensus.

**Table 10 – NOS Comparable Multiples Analysis** [Prices as of January 6<sup>th</sup>]

Company	Last Price	Market Cap EURm	P / E 2015e	P / E 2016e	EPS CAGR 15e-16e	EV / EBITDA 2015e	EV / EBITDA 2016e	EBITDA CAGR 15e-16e	Div Yield 2015E
<b>Cable</b>									
Kabel Deutschland	112.2	9,930	39.1	30.9	26%	13.5	12.1	9%	3%
Ziggo	38.5	7,713	22.462	21.6	4%	1139%	10.8	3%	5%
Altice	61.2	15,148	593.7	92.7	541%	745%	7.0	9%	0%
Numericable	37.9	18,464	39.5	29.6	34%	11.4	11.0	1%	1%
<b>Cable Median</b>			<b>39.3</b>	<b>30.2</b>	<b>30%</b>	<b>11.4</b>	<b>10.9</b>	<b>6%</b>	<b>2%</b>
<b>Telco</b>									
Telefonica	11.37	52,952.4	12.9	12.3	5%	5.9	5.7	3%	6%
Telecom Italia	0.8575	15,667.2	12.1	11.9	1%	5.0	4.7	-1%	2%
Orange	13.37	35,415.6	13.9	13.4	4%	5.3	5.2	0%	5%
Jazztel	12.58	3,227.7	30.5	21.1	44%	12.9	10.2	24%	0%
Iliad	193.8	11,323.7	27.4	21.6	27%	8.2	7.0	14%	0%
<b>Telco Median</b>			<b>13.9</b>	<b>13.4</b>	<b>4.9%</b>	<b>5.9</b>	<b>5.7</b>	<b>8%</b>	<b>3%</b>
<b>Blended Multiple</b>			<b>26.6</b>	<b>21.8</b>	<b>17%</b>	<b>8.7</b>	<b>8.3</b>	<b>7%</b>	<b>2%</b>
<b>NOS</b>	<b>4.95</b>	<b>2535</b>	<b>18.8</b>	<b>17.1</b>	<b>10%</b>	<b>6.4</b>	<b>6.2</b>	<b>3%</b>	<b>2%</b>
Premium/Discount			-29%	-22%		-26%	-25%		

Source: Bloomberg; NOVASBE Research

As it is observable, NOS trades at a considerable discount both in Price-to-Earnings and EV/EBITDA. Still, I would be reluctant to call out the cheap valuation of NOS. Firstly, NOS suffers from a Portuguese market discount – less coverage, less liquidity and ultimately a discount give the recent events in the economy such as the Espírito Santo Group ruin. Secondly, the discount is justified when you look at nearer-term growth expected for NOS vs. the blended compositor. NOS EBITDA compounded annual growth for 15E-16E is 3% vs.

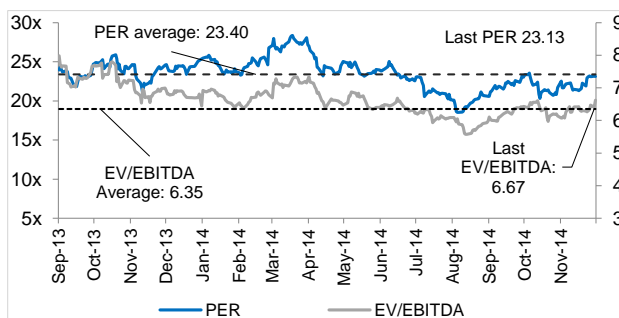


blended of 7%. As far as EPS growth is concerned, difference is equally significant 17% in blended composite vs. 10% for NOS.

This proves to be more reasonable if we simply focus on the Telco companies. Looking at the latter, NOS actually trades at an 8.5% premium on EV/EBITDA 15E, despite higher growth prospects for the denominator. In the case of P/E, NOS does trade at a premium against the Telco carrier composite selected, but it seems to be justified on the back of higher expected EPS growth. Therefore, multiple wise, NOS is not far from being fairly priced. The issue is here is the lack of truly comparable firms – the Portuguese market is not represented on the comparables; and most firms are not a fully convergent company across mobile, broadband, Pay TV and fixed voice as NOS is since the merger. Thus, multiple valuation is rather limited in this case.

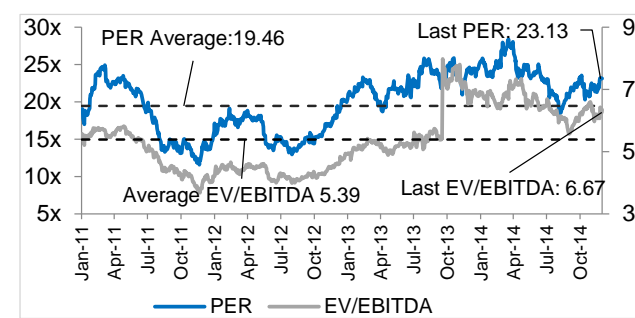
Alternatively, we can look at the historical multiples of Zon (only Zon-Optimus since the 3Q13) and assess whether the stock it at a reasonable entry point or not. What we may conclude when looking for a 3-year period is that the stock is expensive, given it is 23% above its average EV/EBITDA for the period and 19% above its average P/E. However, this is ignoring the shift from a more cable-like company, seen also as a distributor of content; to a fully convergent player once the merger took place, offering both mobile and fixed services. This is evidence by that fact that if only consider multiples since the time of the merger approval, September 4<sup>th</sup> 2013, then its only 1% above its average P/E and actually 8% above its average EV/EBITDA, and most of this was gain in the last two weeks where the stock show considerable resilience when compared with the market's performance. Therefore, we can conclude that from a multiple stand point, NOS is somewhat fairly priced.

**Chart 17 – NOS Multiples since September 2013 (Merger)**



Source: Bloomberg

**Chart 18 – NOS Multiples in the last 3 years (1)**



Source: Bloomberg  
 (1) ZON Multimédia prior to ZONOP/NOS Stock

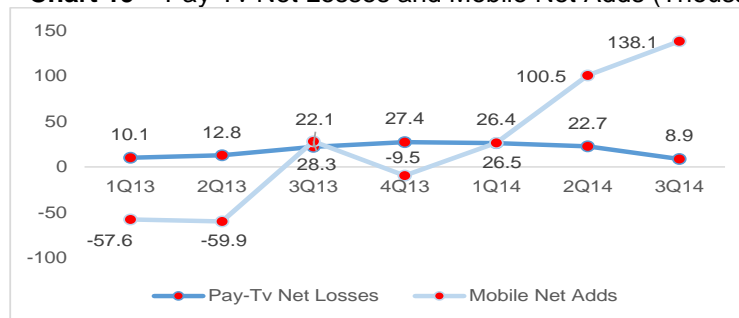
## Financial Forecasts

### Revenues – enjoying convergence

#### ▪ *Consumer Telco*

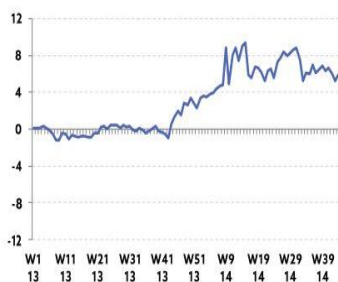
I believe that NOS will continue to benefit from its success in placing its convergent quadruple play offer in the market, despite Vodafone's aggressive pricing. Firstly because there is evidence that NOS is performing better in its convergent offer in most recent quarters, as I illustrated in a graph above – Pay-Tv have decrease significantly in past two quarters, and Mobile net additions have increase from negative in 4Q13, to over 138k in just 3 quarters. This figure translated into a 70 bp basis point gain in overall mobile subscribers' market share according to ANACOM.

**Chart 19 – Pay-Tv Net Losses and Mobile Net Adds (Thousand subscribers)**



Source: Company Data

**Chart 20 – Net Mobile Number Portability (Thousands/Week)**



Source: ANACOM; Company Information

Also, mobile portability request in favour of NOS have been net positive al throughout 2014, as shown on the figure to the left, which means there is a taking-up of the quadruple play bundle.

As I explained in the market overview section, the telecom market is not in for a growth story going forward in Portugal. Therefore, the issue here is who will emerge as a dominant player as the market shows a clearly trend towards convergence. Although Vodafone is making considerable progress in terms of subscribers due to its pricing (€25.99 for its quadruple play bundle, recently increased from €24.99) I estimate that Vodafone actually loses money in each new customer they earn at that price.

The network payment under ADSL is regulated by ANACOM and makes Vodafone pay PT for the use of its network €8.7 per household, whereas for Fibre (FTTH, that is, Fibre-to-the-home) it is Vodafone which has to incur in the investment – not only the fibre cabling to get to a certain area but then also the OTH equipment needed to make the fibre reach the floors above ground, which I estimate to add up to €450 per customer, divided by the 24 month duration of the contract I arrive to the €18.75 on the following table. Although the

fiber represents an investment that is then reusable for possible extension of the contract, unlike the network rent to be paid to PT, it must be made upfront, therefore takes a more material toll in Vodafone's cash flows than the latter. Also, programming costs are the content and setting costs for the channels given on a quad play bundle to a customer. The number I came up with is on the low range of NOS' estimations of said costs. For Vodafone, the number is likely significantly higher because Vodafone should have a lower bargaining power on this end, since it is only approximately 150k fixed customers. Lastly, there are termination fees on the case of the ADSL network, but for both cases one must consider also the rental of set top boxes (which Vodafone offers in its contract) which should account for at least €4.2 per customer. Overall, a broad picture for Vodafone's triple play bundle cost structure is explicit on the figure to the right.

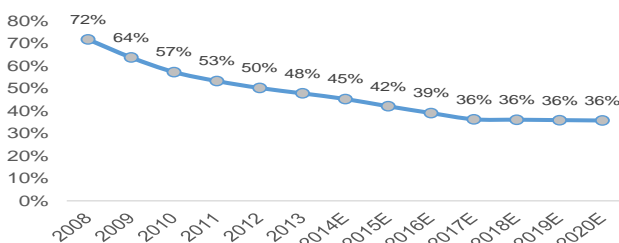
**Table 11 – Vodafone Fixed Service Bundle Cost Structure, €**

Costs	ADSL	FTTH
VAT	6.0	6.0
Network	8.7	18.75
Termination Rate	1	0
TV Programming costs	12	12
Set topbox rental	4.2	4.2
<b>Total Costs</b>	<b>31.8</b>	<b>40.9</b>
VOD's Quad Play Bundle Price	25.99	25.99

Source: ANACOM; Company Information; NOVASBE Research

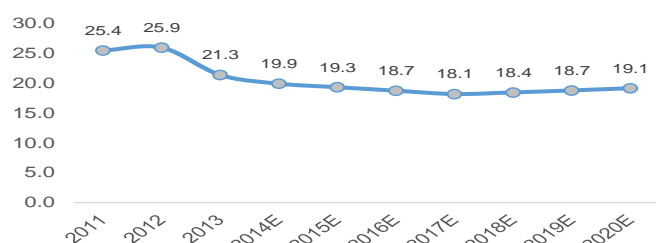
Overall, we have that Vodafone actually loses almost €6 on every new customer served via ADSL and close to €15 via FTTH. This is a rough estimate but excludes other material costs such as sales commissions or incremental costs for call centres (more customers, more calls, and higher headcount) so I am confident of the conclusion that this pricing is not viable for Vodafone, regardless of the euro-large margin for error. Also, there has been further evidence of the indication that Vodafone will increase its headline price from the current €25.99. Vodafone recently introduced a caveat into its pricing, where in order to enjoy the 7-day time-warp service, you must pay separately the rental of the set-top box that allows that function, costing €4/month. If you add that to the price 1€ price increase verified in July, it fair to argue that Vodafone charges €5 more for the same services than it did 6 months ago. This supports my case of a headline normalization after 2015.

**Chart 21 – Pay-Tv Market Share, %**



Source: ANACOM; NOVASBE Research

**Chart 22 – ARPU per Fixed Customer,**



Source: NOS; NOVASBE Research

Therefore, I consider that Vodafone will not be able to practice this price at beyond 2015. Even if customers stay locked in these terms for 2 years for the quadruple play bundle, from 2017 onwards the competitive landscape should change. This translate into my projections of a loss in Pay-Tv market share by NOS until 2017, at increasing smaller rates given the trend already demonstrated in chart 15, but afterwards a stabilization of the same. The same reasoning can be applied to the implied ARPU on fixed customers. Once competitive pressure eases, NOS ARPU on each fixed subscriber may revert its trend and conservatively grow at the expected inflation rate.

Even throughout the coming two years, in a context of loss of market share in the Pay-Tv market, because NOS is the Pay-Tv leader a current market share of 45.3% it still as a considerable base of customers for which it can up-sell towards fixed and mobile bundles.

This has been the case since during 2013, NOS quadruple play additions were 89% originated from already Pay-Tv customers.

Overall, what I project is then that NOS revenues in the first years of my analysis grow at a very modest rate essentially due to the up-scaling of Pay-Tv customers towards mobile and fixed bundles but under the pressure of Vodafone's pricing. But after 2016E/2017E, the ARPU for the customer with fixed assess and mobile can grow at the inflation rate as well and the market shares for Pay-Tv and fixed should reach a somewhat steady-state.

In mobile, the gain of market share is actually occurring today already, and should continue to progress in terms of mobile subscribers along with an increase of ARPU due to the effect highlighted above of an increasing preference for pre-paid contracts. I would highlight that this is not significantly margin dilutive for NOS. For Vodafone and PT, which have a larger subscriber base in mobile, the margin dilution maybe significant because once the subscriber take-up a converging bundle, they get on average less then they did for a stand-alone mobile subscriber. Whereas for NOS, it is adding mobile customers via Pay-Tv (89% of bundle take-up originated from clients who were already Pay-Tv subscribers of NOS), so they are mainly new customers in mobile segment together.

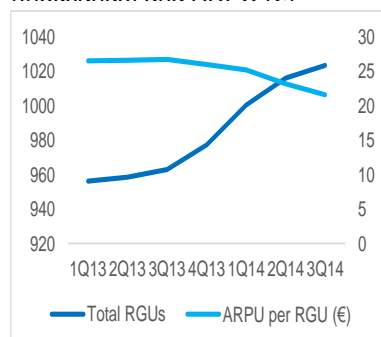
### ▪ *Business Telco*

Another important side of my revenue story going forward is the corporate segment of the Telco business unit. Traditionally, ZON was not a very important player in the corporate segment - as of 2013, I estimate NOS had an approximate 15% share of a €2bn market of corporate clients<sup>12</sup>. However, what we have seen in the most recent quarter is that NOS has won very important large accounts in the corporate segment. Most notably, BANIF, BPI, Minister of Health, Águas de Portugal and Caixa Geral de Depósitos. This is very material for NOS not only because of the dimension of these contracts – the CGD contract for example is worth €30m revenues for a 5 year and typically these contracts are renewed at least once – but also because accounts such as public administration and banks were “flagship” accounts for market incumbent Portugal Telecom, and they are to some extent a challenge of the reigning status quo in the telecom market context until quite recently.

I am confident that this trend will continue to benefit NOS throughout 2015 (bearing in mind that often these large contracts and revenues are only realized 6-12 months later) on the back of three major factors. Firstly, it has clearly been a focus of NOS management recently to improve its business offering, as illustrated by the acquisition<sup>13</sup> in 3Q14 of Main Road from Sonaecom. Main Road is a Portuguese data management and IT company that therefore brings not only added know-how for NOS corporate solutions offering but also complementary infrastructure such as two data centers, in Lisbon and Oporto.

Secondly, the turbulence in PT helps NOS wins contract. Portugal Telecom is of today a difficult company to manage until the Altice purchase is done. It can incur in major strategic changes since it is about to be acquired, but until then it is an asset that Oi wants to

**Chart 23 – Revenue-generating units in business segment (thousands) and ARPU (€)**



Source: Company Information

<sup>12</sup> Source: ANACOM, Company Information

<sup>13</sup> Main Road was acquired by €14m in cash; on a multiple of 5.6x EBITDA post-synergies

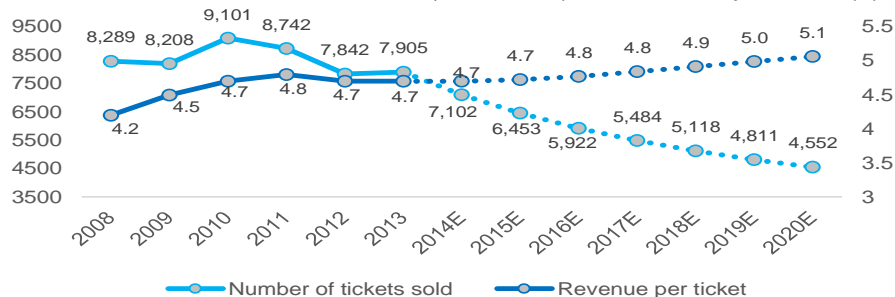
dispose of, and so no less focus should be given to it on a management and operational level. Therefore, NOS is experiencing an unprecedented timing to collect major corporate clients from Portugal Telecom. Lastly, the Zon-Optimus merger made NOS a fully integrated player, capable of offering convergent products that include mobile solutions, probably the priority number #1 in the corporate context. Thus, the progressive integration of the two companies make NOS a much more capable of serving any company's needs given its convergent offer.

In the SME and SOHO, NOS has been gaining market share with RGUs growing over 6% year-on-year in 3Q14, having a total of 1.02 million RGUs. But on the other side of the coin NOS has been experiencing significant pricing pressure in the segment as shown on the right.

### ■ Cinema and Audiovisuals

As for cinema and the audiovisuals, I predict a continuation of the structural decline verified in the past years in volume of tickets sold, and I do not believe on the IMAX's power to effect the ARPU per movie-goer, at least on material level since it is already available for a year now, and it is yet to impact positively said ARPU. Therefore I expect average revenue per ticket simply to grow at the expect inflation rate.

**Chart 24 – Number of ticket sold (thousands) and revenue per ticket (€)**



Source: Company Information

Taking all of the above into consideration, the following table summarizes my projection for firm's revenues:

**Table 12 – Revenues per business segment, EURm**

€m	2014E	2015E	2016E	2017E	2018E	2019E	2020E
Telco	1330	1349	1353	1359	1411	1469	1533
Cinema & Audiovisuals	104	90	87	85	83	81	79
Others and Eliminations	-44	-44	-44	-44	-44	-44	-44
<b>NOS Revenues</b>	<b>1390</b>	<b>1395</b>	<b>1396</b>	<b>1399</b>	<b>1449</b>	<b>1506</b>	<b>1568</b>

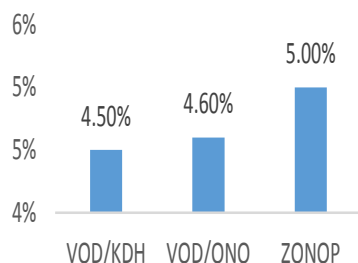
Source: NOVASBE Research

## EBITDA – Synergies should allow margin improvement

My projection of EBITDA relies heavily on a margin improvement going forward on the back of significant operational synergies from the Zon-Optimus Merger. It is important to note that I expect these synergies to reflect exclusively on the Telco business unit, as I do not project any synergies in the Cinema & Audiovisuals unit.

The operational synergies are clear from a logical stand point – commercial costs should be lower under a single brand; SG&A should decrease as well via lower rent and leasing costs on real estate and offices used by the combined company; and overlap of corporate functions such as sales team, help centers and back-offices is also viable. The issue here is how big they are.

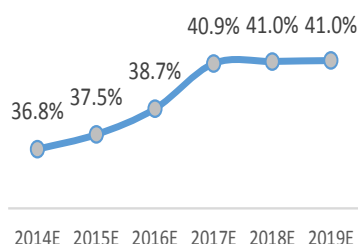
**Chart 25 – OPEX Synergies as % of combined OPEX**



**Source:** Company Information; Berenberg Research

In a first stage, NOS projected €50-60m synergies, later changing to a more ambitious target of €80-90m, pointing circa 30% of those to be operational. In order to assess the reasonability of this OPEX synergies, I compared its weight in total OPEX, which yields approximately 5%. I believe this figure is sensible since, looking at similar acquisitions that have happened recently (between a more cable-focused firm and a mobile operator; Vodafone/Kabel Deutschland deal especially) they have provided similar guidance, as I show on the figure to the left.

**Chart 26 – Forecasted EBITDA Mg (%)**



**Source:** NOVASBE Research

Thus I project EBITDA margin improvements in-line with OPEX savings of 5%, which yields me evolution of EBITDA margins to the right, with a stabilization of the latter at 41% in the longer-term. I believe this is a good threshold seen as that was the margin practiced by the incumbent in the past (40.5% in 2013), and in a context of a shrinking sector, I would not expect NOS to surpass the best EBITDA margins practiced in the recent history of the sector. Taking into account company guidance, the projected OPEX savings come approximately 53% from staff costs, 20% from content costs (for instances TV programming costs) and 27% for commercial costs and business logistics.

There is, however, a downward force as far as EBITDA margins are concerned originating from the large corporate accounts that I expect NOS to win in the near future. NOS investor relations team guidance was that NOS had to bid quite aggressively to win the major CGD and BPI contracts from Portugal Telecom, and margins should be 2/3 than those practiced in the consumer side of the business, putting them on the 25-30% range. As the volume of sales originating from these large corporate accounts rises, this may be a downward pressure on EBITDA margin.

The following table summarizes my projections for the EBITDA going forward:

**Table 13 – Forecasted EBITDA, EURm and margin (%)**

€m	2014E	2015E	2016E	2017E	2018E	2019E	2020E
EBITDA	511	523	540	572	592	615	641
EBITDA Margin	36.8%	37.5%	38.7%	40.9%	40.9%	40.9%	40.9%

Source: NOVASBE Research



## Cash Flow Generation

### ▪ *CAPEX stabilization from 2017 onwards*

NOS will incur in very significant CAPEX this year and in 2015 due to an expansion of its household coverage in roughly 400k households. This will make total CAPEX reach its peak this year and the next, at an estimated €320m and €330m, respectively. Gradually, this figure should be reduced until it reaches a steady-state in 2017 of €245m yearly, as no major non-recurrent CAPEX investment is on the horizon; or alternatively at approximately 16-18% of revenues.

This figure however implies significant network-related synergies associated with the merger, being the most important the €10m/year savings relative to the mobile virtual network operator (MVNO) deal struck between Zon and Vodafone. As the contract ended in 2013, ZON renegotiated a similar deal with Optimus instead, stopping the cash from leaving the NOS group.

Overall, NOS guidance suggests a re-run rate of CAPEX synergies of close to €60m, being distributed as follows: 29% in MVNO and Fibre contracts migration to Optimus; 37% savings directly related with redundant network investments and lastly 34% to infrastructures for information systems and information technologies. In their Frankfurt roadshow, NOS push the timing for IT integration synergies to only be significant on NOS accounts in 2015. Overall, I incorporate the company's guidance as given until 2019E, and from then onwards I estimate CAPEX at the lower end of percentage of revenues long-term rate. Which yields the following:

**Table 14** – Forecasted CAPEX, EURm and in % of Revenues

	2014E	2015E	2016E	2017E	2018E	2019E	2020E
Total CAPEX	318	329	265	245	245	255	245
as % of revenues	23%	24%	19%	18%	17%	17%	16%

Source: NOVASBE Research; Company Information

It is equally important to take note of the networking capital requirements. As no slump increase in demand is expected, but rather a gradual on the services provided due to the reasons stated in the section “Revenues – enjoying forecast”; I estimate networking capital requirements to grow proportionally to COGS, sales and inventory. Hence, I forecast future inventories, trade receivables and trade payables based on the historical behaviour of days in receivables, days in payables and days in inventories in the company.

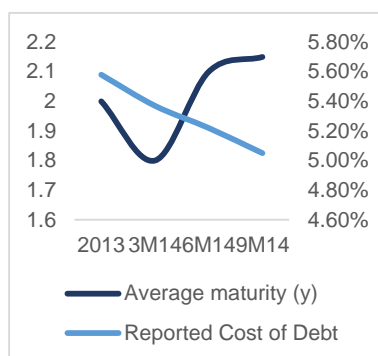
### ▪ *What to do with the cash – substantial shareholder remuneration on the horizon*

The firm's main focus as stated in its 2014 strategy day is domestic market share growth via the full integration of Zon and Optimus and a fully convergent operator. Given the picture

that I have painted in the sector outlook of this section (especially given the recent announcement that Altice's €7.4bn offer to buy PT Portugal has been accepted by Oi), I do not foresee much space for M&A activity in the near future: I do admit the possibility that NOS may incur in acquisitions such as the one for Mainroad, as they can be comfortably accommodated by NOS' cash in the balance sheet and do not require any debt or equity issuance and they still help to earn market share. However, in a more consolidated market with just three players I do not expect NOS to incur in major acquisitions. Also, NOS management stated it would be unlikely for them to increase the stake in ZAP or look for further growth opportunities in Africa via acquisitions, therefore I am confident that neither M&A nor international expansion will be the primary goals for the cash inflow I estimate for the company – FCF growth of 24% for 16E-18E.

Thus, in my opinion the cash generated by the company in coming years will be directed towards shareholder remuneration. In a no M&A scenario, NOS could pay dividends in 2016 of as much €0.27/share without ever surpassing what I consider to be a steady level of Net Debt/EBITDA of 2.0x. This scenario would mean a distribution equivalent to a 6% dividend yield at NOS' current price.

**Chart 27** – Reported average cost of debt (%) and average debt maturity in years



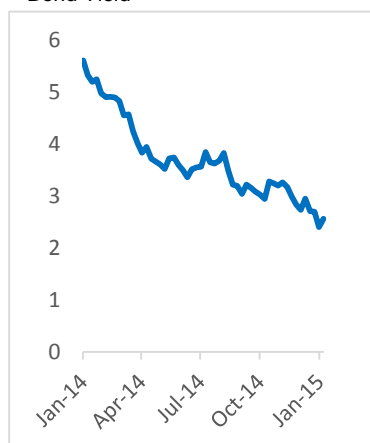
## Lower cost of debt as a trigger

Going forward I expect NOS to lower its cost of debt, and consequently have lower interest expenses which will allow for better cash flow generation in the future. My belief is firstly based on the refinancing activities NOS has undergone in 2014. In 2Q14, NOS completed a bond issue for €100m with a 5.5 year term along with a €175m bond issue in 3Q14, both done together with the early redemption of previously existing bonds transferred from Sonaecom to NOS once the two companies merged. Although the latter was a private placement, given some colour provided by the firm, estimate it to be close to 3.10%. Overall, these two refinancing deals have had a material impact in the average cost of debt incurred by NOS, and it also pushed the average maturity to alter in time, as is illustrated in the figure to the left – the average cost of debt for the first 9 months of 2014 stood of 5.05% vs. 5.58% in the end of 2013. This improvement can be attributed both to an overall improvement on financing conditions in the Portuguese market [see chart 28], and also to the better prospects of cash flows as the two firms were integrated successfully.

Although the cost of debt does not directly affect the unlevered free cash flows used in my valuation for the company, a lower cost of debt make obligation to bondholders more likely to be honoured, and therefore make NOS' equity less risky (recalling the residual nature of Equity,  $E = EV - D$ ). I am, consequently, confident that further refinancing deals can be a positive trigger for the shares throughout 2015. This is backed by the fact that NOS has €372 million euros of bonds and loan due in 2015, and if NOS continues to refinance itself at the rates secured on the placements mentioned above, there can be material changes to the cost of debt. For instance, I estimate that a 50 basis point decrease on the amount of debt due in 2015, would decrease my cost of debt by 12 bps.

Source: Company Information

**Chart 28** – Portuguese 10Y Gov. Bond Yield



Source: Company Information

## Scenario Analysis

**Table 15** – EBITDA Forecasted under three scenarios

EURm	EBITDA 15E	EBITDA 16E	EBITDA 17E
Base Scenario	565	582	606
Bad Scenario (1)	552	551	564
Good Scenario (2)	567	603	637

Source: NOVASBE Research

In this section I attempt to model the more material scenarios that would change the fair value of the stock and factor in those scenarios into my valuation for NOS. Firstly, I consider the scenario of the regulatory approval of the Altice/PT deal happening in the first semester of 2015, but under an imposition of Altice to sell Cabovisão to Vodafone, triggering a headline price increase in Vodafone. As mentioned above, I find this quite unlikely due, firstly, to the expected length of regulatory assessment – the Zon/Optimus deal took 8 months to be approved, and the deal had considerably less overlap than this one – and secondly because the deal (and consequent increase in fixed service market share for Vodafone) approval does not oblige Vodafone to increase its headline price immediately.

Under this scenario, the pressure of Vodafone's pricing would have faded sooner when, so I would expect to see a better ARPU performance in 2015 and 2016 (on back of less customer entering through the lower end bundles, such as or the existence of less promotions). Also, the trend of declining Pay-Tv losses should accelerate or possibly disappear under equal pricing. Consequently, Revenues for the 15E-17E would increase, but would expect similar margins on EBITDA.

On an opposing side, there is the hypothesis that Vodafone keeps this price beyond 2015, despite the clear evidence that the price is unviable, as shown in section "Revenues – enjoying converge" of this report. This event is the major risk to my fair value, and it could be triggered by the regulatory dismissal of the Altice/PT deal (under a 4 player-market, there is higher competition) or simply by a choice of Vodafone's management to achieve a higher scale of subscribers before easing pricing pressure.

Although I find this event more likely than the positive scenario described above (because the latter requires an immediate response by Vodafone), I still believe it is a far picture of reality – VAT, programming costs and network alone make Vodafone lose money on each customer it adds at this current price, not even accounting for any sales commission, increased customer support costs and other. Therefore, it is unreasonable to assume they can pursue this pricing for an additional two years (Vodafone's London management should have its stop-and-loss threshold as well).

**Table 16** – Share Price under three scenarios considered

	Share Price (€)	Probability
Base Scenario	6.39	85%
Bad Scenario (1)	5.55	10%
Good Scenario (2)	6.98	5%
Final Target Price	6.34	

Source: NOVASBE Research  
Note: The target price above excludes dividend payment

Having described both scenarios, the tables on the left describe the changes to inputs made under those hypothetical circumstances, along with the consequences on the company's financial performance, and lastly, its fair value per share. Notice, however, the fair value stated for NOS' stock in this report, already includes that those scenarios at their respective probability. I estimate the first scenario where Vodafone increases its headline price still during 2015 to have a 5% chance of occurring, whereas the scenario where Vodafone extends its current pricing beyond the end of this year as, in my view, a 10% chance of occurring.

## Appendix

### Financial Statements

#### NOS Balance Sheet

EURm	2015E	2016E	2017E	2018E
Cash and cash equivalents	41	41	41	41
Net Account Receivables	377	385	390	405
Inventories	52.6	53.8	54.4	56.6
Taxes receivable	7.5	7.5	7.5	7.5
Prepaid expenses	45.6	45.6	45.6	45.6
<b>TOTAL CURRENT ASSETS</b>	<b>523.3</b>	<b>533.2</b>	<b>538.5</b>	<b>555.9</b>
<b>NON - CURRENT ASSETS</b>				
Deferred Taxes	138.4	138.4	138.4	138.4
Investment in Group Companies	30.9	30.9	30.9	30.9
Intangible assets	1,158.3	1,158.3	1,158.3	1,158.3
Tangible assets	1,092.5	1,021.7	941.4	873.2
Other non-current assets	26.4	26.4	26.4	26.4
<b>TOTAL NON - CURRENT ASSETS</b>	<b>2,446.5</b>	<b>2,375.7</b>	<b>2,295.4</b>	<b>2,227.2</b>
<b>TOTAL ASSETS</b>	<b>2,969.8</b>	<b>2,908.9</b>	<b>2,834.0</b>	<b>2,783.0</b>
<b>LIABILITIES</b>				
<b>CURRENT LIABILITIES:</b>				
Short term debt	235.2	242.1	247.7	252.3
All accounts payable	484.7	495.8	501.8	521.4
Accrued expenses	154.3	154.3	154.3	154.3
Deferred income		0.0	0.0	0.0
Taxes payable	17.8	17.8	17.8	17.8
Current Provisions and other liabilities	1.6	1.6	1.7	1.7
<b>TOTAL CURRENT LIABILITIES</b>	<b>893.5</b>	<b>911.6</b>	<b>923.3</b>	<b>947.5</b>
<b>NON - CURRENT LIABILITIES</b>				
Long-term debt	955.2	983.0	1,005.9	1,024.8
Provisions for other liabilities and charges	197.2	203.0	207.7	211.6
<b>TOTAL NON - CURRENT LIABILITIES</b>	<b>1,152.4</b>	<b>1,185.9</b>	<b>1,213.5</b>	<b>1,236.4</b>
<b>TOTAL LIABILITIES</b>	<b>2,045.9</b>	<b>2,097.5</b>	<b>2,136.8</b>	<b>2,183.9</b>
<b>SHAREHOLDER'S EQUITY</b>				
Share capital	5	5	5	5
Capital issued premium	854.2	854.2	854.2	854.2
Own shares	(9)	(9)	(9)	(9)
Reserves, Retained Earnings and other	126	126	126	126
Net Income	62	62	62	62
<b>EQUITY BEFORE NON - CONTROL.</b>	<b>1,038</b>	<b>1,038</b>	<b>1,038</b>	<b>1,038</b>
Non-controlled interests	10	10	10	10
<b>TOTAL EQUITY</b>	<b>923.862</b>	<b>811.326</b>	<b>697.149</b>	<b>599.068</b>

#### NOS Income Statement

EURm	2015E	2016E	2017E	2018E
REVENUES	1425.6	1458.4	1476.1	1533.7
EBITDA	565.1	583.0	603.4	645.4
Depreciation	336.2	335.8	325.2	313.3
<b>EBIT</b>	<b>229.0</b>	<b>247.2</b>	<b>278.2</b>	<b>332.1</b>
Financial costs	-34.1	-34.8	-35.2	-35.5
Net Financial Result	-56.3	-57.4	-58.1	-58.6
<b>EBT</b>	<b>172.7</b>	<b>189.8</b>	<b>220.1</b>	<b>273.5</b>
Income taxes	38.0	41.8	48.4	60.2
<b>Net Income</b>	<b>134.7</b>	<b>148.1</b>	<b>171.6</b>	<b>213.7</b>
Minorities	0.4	0.4	0.4	0.4

## Methodology for the cost of Debt

Methodology used is available in Moody's, under the document Moody's Investor Service (2010) Rating Methodology - Global Telecommunications Industry dated from 2010. The sub-factors that estimate the credit rating for NOS are both of quantitative and qualitative nature. The values for the quantitative factors are calculated based on 2013's audited account, as to not be biased by my own estimations. After following the methodology of Moody's, an equal weight was given to this score and to the average score for Portugal's Sovereign Rating Baa1. The result yielded a credit score of NOS of 10.6, which translates into a Baa1 rating. The following table summarizes the score attributed to every sub-factor included in the model.

	Value	Rating	Score	Weight
<b>Portugal Sovereign Rating</b>		Ba1	11	
<b>Debt/EBITDA</b>	<b>1.93</b>	A	6	9%
<b>FCF/DEBT</b>	<b>9.4%</b>	Baa	9	7%
<b>RCF/DEBT</b>	<b>32.0%</b>	Baa	9	10%
<b>(Ffo+Int.)/gross. Int</b>	<b>11.8</b>	A	6	13%
<b>(EBITDA-CAPEX)/Gross Int.</b>	<b>5.7</b>	Baa	9	8%
<b>EBITDA MG</b>		Baa	9	5%
<b>Financial Policy</b>		Baa	9	5%
<b>Market Share</b>		Baa	9	8%
<b>Regulatory</b>		Baa	9	8%
<b>Scale</b>		B	15	12%
<b>Business Model, Competitive Environment</b>		B	15	15%
<b>Score</b>		Baa3		<b>9.96</b>
<b>Weighted Score with Sovereign</b>		Ba1		<b>10.5</b>

# Disclosures and Disclaimer

## Research Recommendations

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<b>Buy</b>	Expected total return (including dividends) of more than 15% over a 12-month period.
<b>Hold</b>	Expected total return (including dividends) between 0% and 15% over a 12-month period.
<b>Sell</b>	Expected negative total return (including dividends) over a 12-month period.

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